

Notice of Allowability

Application No.

10/772,088

Examiner

Jacob Y. Choi

Applicant(s)

MINANO ET AL.

Art Unit

2885

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to November 6, 2007.
2. ☒ The allowed claim(s) is/are 6 and 7.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

Examiner's Comment

1. Examiner acknowledges that the applicant has amended claims 6 and 7 in independent form including all of the limitations of the base claim and any intervening claims, which was previously indicated as allowable subject matter. Claims 1-5 and 8-49 are canceled. Applicant's arguments, see pages 5-6, filed November 6, 2007, with respect to Claims 6 and 7 have been fully considered and are persuasive. The claim rejections - 35 USC § 102 of September 27, 2007 has been withdrawn.

Allowable Subject Matter

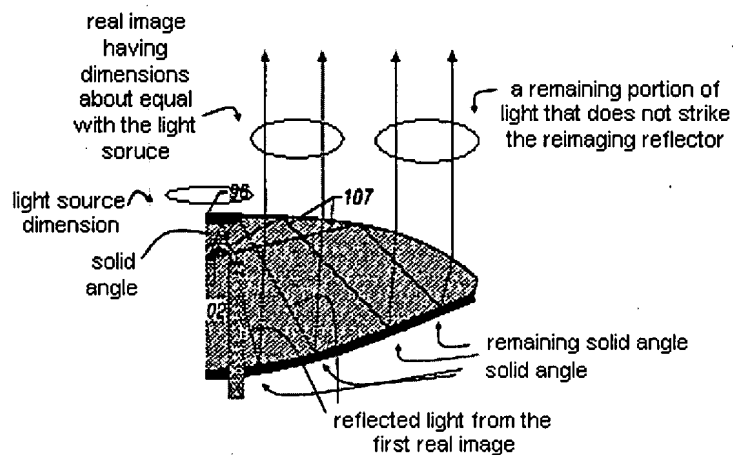
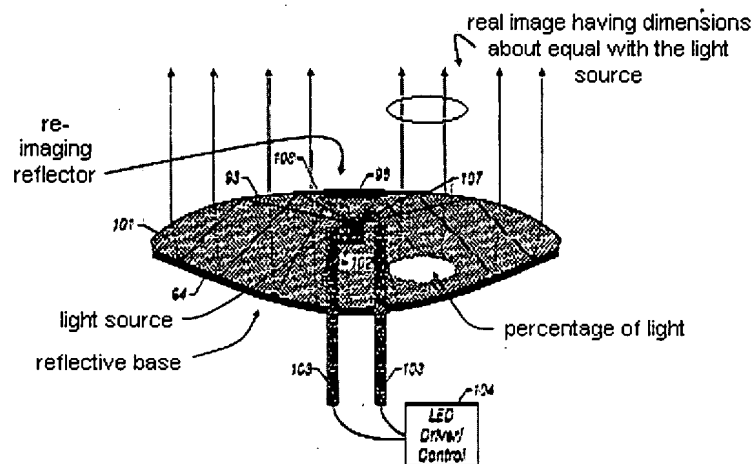
2. The following is an examiner's statement of reasons for allowance: independent claims 6 and 7 similarly recites, an apparatus for use generating illumination comprising, a reflective base, a first light source, a re-imaging reflector with a first sector of a first prolate ellipsoid and second sector of a second prolate ellipsoid, wherein the first sector of the re-imaging reflector is defined by a first ellipsoid (e.g., prolate ellipsoid) having first and second foci, and the second sector of the re-imaging reflector is defined by a second ellipsoid having third and fourth foci.

Because none of the references disclosed the structural details of the re-imaging reflector thereby achieving etendue squeezing comprises four sectors defined by four prolate ellipsoids with four foci, where the second and fourth focus is positioned to the side of the first light source proximate the first light source at a position of the first/second real image, Nor is there any motivation to combine the details of the re-

Art Unit: 2885

imaging reflector with four sectors defined by four prolate ellipsoids, the claims are deemed patentable over the prior art of record.

Minano et al. (USPN 6,639,733) teaches a reflective base (94), a first light source (102) positioned proximate the reflective base (94; Figure 10), and a re-imaging reflector (96) positioned partially about the first light source (102), where a percentage of light emitted from the first light source (102), and at least some of the percentage of light reflected from the re-imaging reflector (96) to the reflective base (94) adjacent (Figure 10) the first light source (102), and at least some of the percentage of light reflected from the re-imaging reflector (96) defines a first real image having dimensions about equal with dimensions of the light source (Figure 10) such that the first real image is adjacent the first light source (102) and the reflective base (94) reflects the light of the first real image (Figure 10), wherein the reflected light from the first real image (96) is directed into *substantially* a same solid angle as a solid angle of *substantially* a remaining portion of light emitted from the first light source that does not strike the re-imaging reflector thereby achieving etendue squeezing of the first light source (see Figure below).



Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jacob Y. Choi whose telephone number is (571) 272-2367. The examiner can normally be reached on Monday-Friday (10:00-7:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jong-Suk (James) Lee can be reached on (571) 272-7044. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jacob Y Choi
Examiner
Art Unit 2885



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